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The receiving water is Lake Erie (Outer Erie Harbor and Lake Erie). The receiving water is classified for the following uses: warm water fishery, aquatic life, water supply and recreation. For the purpose of evaluating effluent requirements for TDS, NO<sub>2</sub>-NO<sub>3</sub>, fluoride and phenolics, there is none.

This permit n longer has a compliance schedule for TRC in Part C because the previous schedule was based on when treatment plant modifications would be complete. These are now deemed complete so no schedule is necessary.

Future compliance status with draft permit limits: The permittee should be able to meet these limits, based on NPDES application data, DMRs, and existing Part II Permit #2570402. With the issuance of this permit, this case is being referred to the operations section for the appropriate follow-up compliance action.

A Part II WQM permit application was submitted January 1998 for treatment plan modifications as set forth in the approved 537 Phase I Plan. WQM #2598403 is for the design of headworks improvements and the addition of an overflow retention facility. Another application, WQM #2597410, was for the construction of a 90-inch relief outfall. These modifications are to increase the peak flow capacity through the POTW resulting from implementation of the CSO related work in the Combined Sewer System. The Department now believes these modifications are complete.

The draft permit was sent to the applicant and EPA Region III on August 21, 1996. The Draft permit notice was published in the PA bulletin on August 31, 1996. The Department received comments from both the Erie Sewer Authority and EPA Region III.

The City of Erie's 537 plan revision has been divided into three phases, in order to allow the revision to proceed in an orderly fashion.

*Phase I, POTW/Outfall Upgrade* - This breakout was provided so that as the next two phases were completed, the increased flow would be provided with treatment and outfall relief to Lake Erie. This phase was approved by letter dated March 8, 1996.

*Phase II, CSO/Conveyance Plan* - This breakout provides for the reduction in number of CSOs and a means of conveying additional flow to the treatment plant. This phase was approved by letter dated October 24, 1997. See the attached Table 1, from the Phase II - Act 537 Plan, for CSO/Conveyance Plan milestone dates.

*Phase III, Center City Area* - This 537 plan revision deals with the permittee constructing facilities to significantly reduce and/or eliminate CSO's in the Millcreek Tube area. Phase III was approved by letter dated June 24, 1999.

A Consent Decree Modification, between the Department and the City will incorporate, by reference, the proposed tasks and completion dates from each of these phase reports. This document will reserve the right to further modify these milestones once additional information is obtained, and additional corrective action plans and schedules are agreed upon.

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**ERIE SEWER AUTHORITY COMMENTS:** On September 25, 1996 and November 20, 1996, Erie Sewer Authority sent comment letters to the Northwest Regional Office of DEP.

The first issue concerns the percent removal for CBOD and TSS. The current NPDES permit contains special condition #11 that allows relaxed CBOD removals during the period between November 1 and April 30. This previous condition allowed 85% removal of BOD5 in the warmer months and 75% removal in the winter months and did not modify the TSS removal rate. This previous condition was not carried forward into the new draft permit.

The federal regulations 40 CFR 133 do allow for an adjustment of the % removal for combined sewer systems on a case-by-case basis. Erie's November letter contains justification for seasonal limits based on weather or seasonal variations. With the sewer system repairs that will result in conveying more storm water to the POTW (CSO control policy - BMP of maximizing flow to POTW), it is expected the plant % removal will be further challenged with more dilute raw sewage flow.

However, the previous permit condition is inappropriate because it includes language from the previous Pennsylvania state definition of secondary treatment (5 consecutive days versus 30 day average federal definition and BOD versus CBOD). This old condition requires a seasonal BOD removal rate of 85% during May 1 to October 31 and 75% during November 1 to March 31.

It is agreed that seasonal % removal rates for both CBOD and TSS are appropriate. The condition on page 3 paragraph e. is revised to add the following: "during the period of May 1 to October 31 and not be less than 75 percent during the period of November 1 to April 30."

The second issue concerns a typo error in the name of the receiving stream for the CSO's discharges. Item B of the foot notes on page 2C should read "B - Mill Creek, East Bank". The format of the redrafted permit was changed to list each outfall and their respective receiving stream on Page 1 of the permit. The East & West Bank delineation was removed from the Mill Creek discharge description.

This concern is also no longer applicable, as the CSO outfalls have been separated into the 537 report areas.

- East-Side CSOs (537 Phase II Plan)
- West-Side CSOs(537 Phase II Plan)
- Central Portion CSOs (537 Phase III Plan, Millcreek Tube)
- Storm Water - Plant Site (537 Phase I Plan)

The third issue concerns sanitary sewer overflow SSO requirements in special condition #7. This SSO list was generated as a result of Erie's investigation of overflows in the 537 Study. These outfalls (31, 31A, 32, 38, 44, 45, 46 and 51) were originally listed as CSO's in the previous NPDES permit but are now known to be sanitary sewer overflows. The permit is revised to remove the sanitary sewer overflow condition as per the attached memo from Terry Fabian, Deputy Sec. for Field Operations.

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The fourth issue concerns the inclusion of maximum concentrations for phosphorus and total residual chlorine (TRC).

- The International Joint Commission (IJC) agreement requires only a 1 mg/l monthly average phosphorus limit. The permit is changed to remove both phosphorus Maximum daily and Instantaneous maximum concentration limits from the permit.
- The TRC instantaneous maximum (Imax) limit is required by the March 15, 1995 Implementation Guidance for Total Residual Chlorine regulation. However, the draft permit contains a TRC I<sub>max</sub> limit of 1.0 mg/l which is not appropriate. The redraft permit is changed to 1.6 mg/l. The 1.6 mg/l is based on converting the monthly average duration to a maximum daily limit or in other words converting the 0.5 mg/l monthly average limit using a coefficient of variation (CV) of 0.5 and n = 30 daily sampling). The Department's TRC Implementation Guidance Paper suggests the I<sub>max</sub> is 150% of this max. daily value. Therefore, the max. daily value is multiplied by 1.5 to obtain the I<sub>max</sub> value.

The fifth and last issue concerns the sample holding time for TRC and fecal coliform tests. We agree with the justification contained in Erie's November 1997 letter. Page 2 of the permit is revised to add a footnote to incorporate the holding times of less than 60 minutes for flows up to 100 MGD and less than 30 minutes for flows greater than 100 MGD.

**EPA REGION III COMMENTS:** On September 30, 1996 and November 26, 1996, EPA sent comment letters to the Northwest Regional Office of DEP.

The first issue is the SSO condition. The Northwest Regional Office is directed to remove the SSO conditions from this permit. The Department is negotiating a new legal agreement with Erie Sewer Authority which will include the sewer system modification. This legal document will address the SSO requirements. Therefore, the final NPDES permit does not contain any SSO conditions. Special condition #7 is removed from the permit.

The second issue concerns the effluent mass and concentration limitations for CBOD and Suspended Solids. The fact sheet correctly shows the basis for these numbers and all the correct mass and concentration numbers. However, the draft permit contains a typo error in the average monthly mass limits for TSS. EPA has reconsidered its original concerns with the less stringent limits. EPA agreed to withdraw their objection concerning this issue provided the correct average monthly mass limit of 40,048 lbs/day is included in the final permit.

The third issue concerns the lack of color limits. There are no technology based limit for color and no water quality standard for color for Lake Erie. Therefore, there is no direct regulatory basis for color limitations or imposing a color limit. EPA agreed to withdraw their objection at this time.

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The fourth issue concerns the Pretreatment Language. EPA's November letter does not clearly detail their objection. EPA believes this permit should contain conditions to address dioxin discharges that may come from the paper mill's indirect discharge. EPA wants permit conditions to include fish tissue testing at the POTW outfall and internal dioxin testing at the bleach plant in the paper mill.

The dioxin test data contained in the NPDES application indicates no reasonable potential to exceed water quality standards based on our current implementation procedures. Additionally, Charles Sapp of EPA Region III indicated there was a dioxin study by EPA some 10 years ago done in the vicinity of the Erie POTW outfall. The two samples from this fish tissue study indicated non-detect results for dioxin. Based on existing data, there are no red flags indicating additional fish tissue testing by Erie POTW is warranted.

International Paper, Hammermill Division has, as of December 1996, ceased the use of elemental chlorine and revised their process to use chlorine dioxide. Thus, the generation of dioxin is no longer a parameter of concern.

Moreover, Erie has an approved Federal pretreatment program which includes implementation of the pretreatment effluent limit guidelines for the paper mill indirect discharge. There is final rule making for revising the paper mill guidelines which includes internal dioxin monitoring at the bleaching process. When these regulations are promulgated, Erie will be required to implement these guidelines as part of their pretreatment program. Regardless, it is inappropriate to require internal monitoring at an indirect discharge in Erie's POTW NPDES permit.

EPA agreed to withdraw their objection concerning this issue. As a related issue the draft permit contains the old pretreatment language. This language was changed in November 1996. The redraft permit contains the latest language as provided by our Central office and approved by EPA for statewide use.

Finally, the Department has additional concerns with the CSO condition and Whole Effluent Toxicity Test (WETT) conditions.

The August draft permit contains the inappropriate CSO condition. Erie has implemented the 6 BMPs and now must implement the three additional BMPs as required by the Federal CSO Control Policy and the Pa. State Strategy. The permit is modified to replace the CSO condition for the continued implementation of the 6 BMPs and the installation of the three new BMPs.

The Department is evaluating the WETT requirements in the new Great Lake Initiative GLI. The draft permit essentially continues the previous WETT permit monitoring requirements for quarterly acute WETT. This WETT data, while an indication of aquatic life protection, fails to adequately define the aquatic life impacts that may be caused by Erie's POTW discharge.

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The permit WETT condition is being revised to require semi-annual acute and chronic WETT using *Ceriodaphnia dubia* and *Pimephales promelas*. The new WETT condition requires the reporting of the *C. dubia* and *P. promelas* raw data, data graphs or plotted data, the acute chronic ratio ACR values and all acute and chronic end-points. This will provide the permittee, EPA and the Department with adequate data to address the GLI requirements on WETT. The cost to implement these revised WETT requirements are about the same as the previous requirements.

Storm water discharges from a site for which a facility is subject to effluent limitations shall have these discharges covered under the facility's NPDES permit. These site storm water discharges are included in Part A, Page 2A.

### **Great Lakes Initiative**

Since the receipt of the renewal application, EPA published final rulemaking on 'Final Water Quality Guidance for the Great Lakes System' (March 23, 1995). This guidance sets specific water quality criteria and implementation procedures to protect the Great Lakes' and their tributaries. Anticipating the future application of these criteria to the Erie STP discharge, Erie's consultant submitted an Outfall Diffuser Study report to determine whether the proposed outfall design would enable compliance with the new criteria. The attached EPA response letter alludes that all GLI criteria, investigated in the report, will be protected.

This is the Department's response to Erie's (Consoer Townsend) 7/17/98 comment letter to the redrafted (6/4/98) NPDES permit.

**TRC Instantaneous Maximum Limit** - This limit, as stated in Footnote (2), Page 3 of the permit is for Department use only. It will not be required to be reported on the DMR form. Our field inspectors use this value as an indicator of treatment plant performance. Reference is also made to the Department's original response on the need for this limit and how it was calculated. The Department feels this limit is still necessary.

**Color Monitoring** - Based on the STP's effluent monitoring the color has gotten significantly better since Hammermill changed from using elemental chlorine to chlorine dioxide in their bleaching process (Refer to the attached DMR summary). Although color is not a GLI parameter, if you apply the default dilution ratio of 10:1, from the final water quality guidance, the STP's limit could be 550 platinum-cobalt units. This is based on the color criteria for recreation protection which is not even applied to the Lake Erie Basin. This evaluation warrants a reduction in the color monitoring from 2/month to 2/year.

The stormwater outfalls 901 through 907 should not have the same lat/long values. This has been corrected along with outfall 908's lat/long.

The Department has added a note to Page 2 on the NPDES permit indicating the sampling location for outfalls 001 & 001A is the junction chamber. There will only be one DMR for both outfalls.



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Section 3d. Specified Toxic Substance Notification Levels on Page 10 of the NPDES permit has been removed. According to 40 CFR 122.42(a)(1) and (2) this reporting does not apply to publicly owned treatment works.

Part B1.b.(3), Page 11 - The Sewer Authority & The City of Erie are afforded the same advanced notice the Department gets on proposed regulations, via the Federal Register. EPA's public notification procedure includes addressing public comment prior to final promulgation. It is not the practice of the Department to notify all regulated entities of proposed regulations that may affect them.

Submittal of Headworks Analysis - Mark Martlin, EPA Region III Pretreatment Coordinator indicated Erie has already submitted a revised headworks analysis which will be approved after some minor revisions are made. Therefore, he does not feel it is necessary to include the headworks analysis submittal language in the final permit. The sentence requiring the adoption of the revised local limit will remain in the permit.

Recalculation of the BAT Limitations for the Erie POTW (Changing the CBOD5 limit to BOD5 in accordance with 40 CFR 133.102).

The following information was gleaned from the 6/7/96 (revised 7/10/96) water quality protection report for the Erie POTW.

**Hammermill**

Average flow from Hammermill for the years '91-'95 =>14.117 MGD

Hammermill Pulp & Paper Production Summary - The paper production number includes purchased and manufactured pulp usage and the pulp production number only includes the amount of market pulp purchased (Tons/Day).

1994 Paper Production	1994 Pulp Production	Total 1994 Production	1995 Paper Production	1995 Pulp Production	Total 1995 Production
565	455	1,020	544	468	1,012

Using 1994 as the maximum T/D and 40CFR 430 Subpart P:

$$\text{BOD}_5 = 7.1 \# \text{BOD}_5 / 1000 \# \text{Product} \quad 1020 \times 7.1 \times 2000 / 1000 = 14,484 \# / \text{Day} \\ (\text{Mon. Ave.})$$

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**Erie POTW**

Secondary Treatment w/o the Industrial Contribution:

$$\text{BOD}_5 = 30 \text{ mg/l} \times 8.34 \times (68.6 \text{ MGD} - 14.117 \text{ MGD}) = 13,632 \text{ \#/Day}$$

**Combined Waste Streams**

$$\text{BOD}_5 \text{ Loading} = 14,484 + 13,632 = 28,116 \text{ \#/Day (Monthly/Average)}$$

$$\text{BOD}_5 \text{ Conc.} = 28,116 / 8.34 / 68.6 = 49 \text{ mg/l (Monthly/Average)}$$

$$\text{Weekly Average} = 1.5 \times \text{Monthly Average}$$

$$\text{BOD}_5 \text{ Loading (Weekly)} = 42,174 \text{ \#/Day}$$

$$\text{BOD}_5 \text{ Conc. (Weekly)} = 73 \text{ mg/l}$$

More recent production data shows no significant change in Hammermill's contribution to the POTW to warrant a change to the above calculation.

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This is in response to additional comments received from the City of Erie & the Erie Sewer Authority, on April 23, 1999, on the redrafted permit. Each point in the 'Summary of Recommended Actions' will be addressed in the order in which they appear.

**1 – 4) Outfall Numbering, Limitations & Monitoring**

Outfall 001 – Combined waste streams from the main treatment plant and the Overflow Retention Facility (ORF) - TRC and Fecal Coliform limitations at the junction chamber.

Sub-Outfall 101 – Main treatment plant effluent – Mass and concentration limitations.

Sub-Outfall 201 – ORF discharge (CSO Related Bypass) – Flow monitoring

Outfall 002 – ORF overflow to a Chlorine Contact Tank (CSO Related Bypass)– to Mill Creek – Flow, TRC and fecal coliform monitoring.

Since CSO outfalls 002, 015, 016, 021, 035, 037, 042, 048 have been eliminated, their identification has been removed from the permit.

EPA's 1994 CSO Control Policy outlines a process for "CSO-related bypass" where, under certain circumstances, wet weather flows can receive primary clarification at the POTW treatment plant and then be discharged, without these flows being subject to secondary treatment requirements. According to 40 CFR 122.41(m) the permittee must show that the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, that there was no feasible alternative to the bypass, and that the permittee submitted the required notices.

The Erie Sewer Authority and the City of Erie have submitted an application (WQM# 2589403) to construct a 6-MG - Overflow Retention Facility (ORF). 'Municipal' flow rates in excess of 90 MGD will be diverted to the ORF, to be discharged, after passing through the headworks. The ORF is designed to provide primary clarification and disinfection to 60 MGD (ave.) and 95 MGD (max.) of wet weather flows. The ORF design will also include a pump station that will return wastewater back to the secondary treatment influent channel. All flows through the ORF will be recombined with the fully treated effluent before being discharged.

40 CFR 122.41(m) defines a bypass as the intentional diversion of waste streams from any portion of a treatment facility. The Departments' Chapter 94.1 further defines a bypass as a diversion occurring either at or after the headworks of the plant. Outfalls 201 and 002 clearly meet this definition. Therefore, a special condition has been added to the NPDES permit identifying these outfalls as 'CSO-Related Bypasses'. The condition also specifies how and when these outfalls are allowed to discharge.



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Although lake elevation data was an important variable in the design of the diffuser it is impractical to have this data measured as part of the justification for using the CSO-related bypass (Outfall 002). The NOAA measurement station, used for the diffuser design, is scheduled to be discontinued. It is also a 'remote read' station, transmitted to NOAA's Maryland office. This data is not readily accessible to POTW personnel to comply with Department reporting requirements for use of the outfall. Therefore, it will not be included as part of the CSO-related bypass use criteria.

### **5) CBOD<sub>5</sub> & TSS Percent Removal & Instantaneous Maximum Limitations**

Erie has requested the percent removal requirements for CBOD<sub>5</sub> (BOD<sub>5</sub>) and TSS be removed using 40 CFR 133.103(e) as their basis. This rule deals with treatment plants receiving less concentrated influent wastewater from combined sewers during dry weather. It allows the permitting authority to substitute either a lower percent removal requirement or a mass loading limit for the percent removal requirements, provided that the permittee satisfactorily demonstrate that:

- (1) The treatment works is consistently meeting its permit effluent concentration limits.
- (2) To meet the percent removal requirements, the treatment works would have to achieve significantly more stringent effluent concentrations than would otherwise be required by concentration-based standards.
- (3) The less concentrated influent wastewater does not result from either excessive infiltration or clear water industrial discharges during dry weather periods.

The Department confirms that conditions 1 & 3 are being met. The following gives further explanation as to why we believe condition 2 is also being met.

The Department does not believe the proper data exists to determine the percent removal being achieved for CBOD<sub>5</sub> (BOD<sub>5</sub>). Erie performs daily influent BOD<sub>5</sub> sampling but, according to their NPDES permit, only performs CBOD<sub>5</sub> sampling on the effluent. Erie also presented data to show the relationship between CBOD<sub>5</sub> and BOD<sub>5</sub> in any given sample. Their analysis predicts there is a 178% difference between the monthly average BOD<sub>5</sub> value and the CBOD<sub>5</sub> value. This is compared to the percent difference of 120% identified in the 40 CFR 133 definition of secondary treatment. The Department is recommending including a BOD<sub>5</sub> limit rather than a CBOD<sub>5</sub> limit in this permit in order to establish a direct comparison between influent and effluent. However, even if this were done the following problem, identified for TSS, would also apply to predicting BOD<sub>5</sub> percent removal. This would make it difficult if not impossible to determine a meaningful percent removal value for either parameter.

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Erie does perform influent as well as effluent TSS sampling. Under 40 CFR 103(b) Erie qualifies for higher concentration limits due to Hammermill's wastewater contribution but at the same time has less concentrated influent in their domestic wastewater because the area is served by combined sewers. The TSS load Hammermill contributes to the treatment plant assures Erie will meet the second requirement listed above.

40 CFR 133.101(m) defines '*significantly more stringent limitations*' as meaning BOD<sub>5</sub> and TSS limitations necessary to meet the percent removal requirements of at least 5 mg/l more stringent than the otherwise applicable concentration-based limitations. Comparing Erie's DMR data to their calculated, 70 mg/l monthly average TSS limitation shows in order to stay within the 5 mg/l goal the equivalent, permitted percent removal would have to be approximately 21% (Refer to the attached table). As Erie noted, their influent concentrations will continue to go down as their CSO work continues and more flow is transported to the plant. This would, in turn, make this percent removal value even lower.

Considering the above facts along with the variance allowed under 40 CFR 133.103(a), for combined sewer communities, the Department does not believe an appropriate percent removal can be calculated for either BOD<sub>5</sub> or TSS. Therefore, it is proposed to limit the discharge (Outfall 101) by mass loading only.

Inst. Max. – Refer to the I. Max. discussion for TRC. The Department's standard practice in calculating the I. Max. value is to multiply the 30-day average concentration by 2. The Department feels this results in a reasonable number to gauge treatment plant performance in relation to the Average Monthly limit. Your previous permits used this same multiplier for calculating this value.

#### **6) Use of CBOD for Effluent Testing**

Erie wishes to continue reporting CBOD<sub>5</sub> instead of BOD<sub>5</sub>, as EPA requested. Erie contends that the technology based BOD<sub>5</sub> limit of 49 mg/l (Monthly Average), calculated by the Department, is too stringent based on comparative CBOD/BOD sampling they performed in 1994.

Erie's proposed BOD<sub>5</sub> limit was not formulated based on its' equivalence to CBOD<sub>5</sub>. Rather, it was calculated based on meeting a technology treatment standard for the Pulp & Paper Industry and to meet the definition of 'secondary treatment' found in 40 CFR 133.

Federal Regulation allows adjusting the BOD<sub>5</sub> effluent limitation higher if the conditions in 40 CFR 133.105(b) – (industrial waste contributors to a POTW) are met. One stipulation states that the effluent limits cannot be any higher than that allowed by the regulations governing that particular industry. Since no other adjustments are applicable to this situation the Department feels our technology-based calculation was correctly done.

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Hammermill does not provide pretreatment. Instead they rely on the POTW to provide technology-based treatment of their wastewater. Since both facilities have technology based treatment requirements expressed as BOD then it is feasible to permit the combined discharge in such terms. This would more accurately show compliance with both technology-based standards.

By Erie's own analysis of this issue they determined the POTW would not have violated the proposed BOD<sub>5</sub> limit in either 1997 or 1998.

Therefore, the Department has included BOD<sub>5</sub> limitations in the NPDES permit as the more appropriate parameter for measuring the oxygen demand of the effluent.

#### **7) WET Testing Requirement**

The Department agrees WET testing no longer needs to be performed as part of Erie's routine permit monitoring. An e-mail from Carol Young to EPA Region III summarizes DEP - Central Office's assessment of this issue. Their review concludes Erie's request should be granted. (See the attached)

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**Erie Sewer Authority and the City provided comments to the third draft permit on February 10, 2000. The following addresses their concerns in the order in which they appeared in their letter.**

- 1) Since three draft permits have been issued for the same renewal application there have been many decisions made specific to each draft. Some of the same issues have been addressed in more than one of these drafts. Rather than remove previous documentation of these decisions the Department has kept all the narrative responses intact to serve more as a chronological account of what has been considered over the course of issuing this permit. Therefore, regardless of what has previously been decided on WET Testing, the third draft contains the Departments' decision not to require the annual WET testing any longer. Based on our rationale, EPA also concurs with this decision.
- 2) Page 3 and 3A of the permit contained a typographical error identifying the facility as a 'Nonmunicipal Sewage Treatment Works' instead of a 'Publicly Owned Treatment Works'. This error has been corrected.
- 3) The percent removal requirement on page 3A of the permit has been removed to be consistent with the Fact Sheet.
- 4) Noted.
- 5) We have revised the language on page 3a of the permit, Supplemental Information (2), to add: ... 68.6 million gallons per day **and loads calculated using municipal and industrial allowances.**

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6) Regardless of what Outfalls 201 and 002 are named they will still remain a 'bypass' and be subject to the bypass conditions of 40 CFR 122.41(m). Page 11 of the fact sheet outlines the Department's reasoning behind deeming these outfalls as bypasses.

For your reference, the "CSO-related bypass" discussion, as taken directly from EPA's 1994 CSO Control Policy, is re-printed below. Please note EPA clearly uses the term "CSO-related bypass", and therefore we believe it is appropriate to continue use of this terminology in your NPDES Permit to describe the ORF wet-weather operating strategy.

'Maximizing Treatment at the Existing POTW Treatment Plant

In some communities, POTW treatment plants may have primary treatment capacity in excess of their secondary treatment capacity. One effective strategy to abate pollution resulting from CSOs is to maximize the delivery of flows during wet weather to the POTW treatment plant for treatment. Delivering these flows can have two significant water quality benefits: first, increased flows during wet weather to the POTW treatment plant may enable the permittee to eliminate or minimize overflows to sensitive areas; second, this would maximize the use of available POTW facilities for wet weather flows and would ensure that combined sewer flows receive at least primary treatment prior to discharge.

Under EPA regulations, the intentional diversion of waste streams from any portion of a treatment facility, including secondary treatment, is a bypass. EPA bypass regulations at 40 CFR Section 122.41(m) allow for a facility to bypass some or all the flow from its treatment process under specified limited circumstances. Under the regulation, the permittee must show that the bypass was unavoidable to prevent loss of life, personal injury or severe property damage, that there was no feasible alternative to the bypass and that the permittee submitted the required notices. In addition, the regulation provides that a bypass may be approved only after consideration of adverse effects.

Normally, it is the responsibility of the permittee to document, on a case-by-base basis, compliance with 40 CFR Section 122.41(m) in order to bypass flows legally. For some CSO-related permits, the study of feasible alternatives in the control plan may provide sufficient support for the permit record and for approval of a CSO-related bypass in the permit itself, and to define the specific parameters under which a bypass can legally occur. For approval of a CSO-related bypass, the long-term CSO control plan, at a minimum, should provide justification for the cut-off point at which the flow will be diverted from the secondary treatment portion of the treatment plant, and provide a benefit-cost analysis demonstrating that conveyance of wet weather flow to the POTW for primary treatment is more beneficial than other CSO abatement alternatives such as storage and pump back for secondary treatment, sewer separation, or satellite treatment. Such a permit must define under what specific wet weather conditions a CSO-related bypass is allowed and also specify what treatment or what monitoring, and effluent limitations and requirements apply to the bypass flow. The permit should also provide that approval for the CSO-related bypass will be reviewed and may be modified or terminated if there is a substantial increase in the volume

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or character of pollutants being introduced to the POTW. The CSO-related bypass provision in the permit should also make it clear that all wet weather flows passing the headworks of the POTW treatment plant will receive at least primary clarification and solids and floatables removal and disposal, and disinfection, where necessary, and any other treatment that can reasonably be provided.

Under this approach, EPA would allow a permit to authorize a CSO-related bypass of the secondary treatment portion of the POTW treatment plant for combined sewer flows in certain identified circumstances. This provision would apply only to those situations where the POTW would ordinarily meet the requirements of 40 CFR 122.41(m) as evaluated on a case-by-case basis. Therefore, there must be sufficient data in the administrative record (reflected in the permit fact sheet or statement of basis) supporting all the requirements in 40 CFR Section 122.41(m)(4) for approval of an anticipated bypass.

For the purposes of applying this regulation to CSO permittees, "severe property damage" could include situations where flows above a certain level wash out the POTW's secondary treatment system. EPA further believes that the feasible alternatives requirement of the regulation can be met if the record shows that the secondary treatment system is properly operated and maintained, that the system has been designed to meet secondary limits for flows greater than the peak dry weather flow, plus an appropriate quantity of wet weather flow, and that it is either technically or financially infeasible to provide secondary treatment at the existing facilities for greater amounts of wet weather flow. The feasible alternative analysis should include, for example, consideration of enhanced primary treatment (e.g., chemical addition) and non-biological secondary treatment. Other bases supporting a finding of no feasible alternative may also be available on a case-by-case basis. As part of its consideration of possible adverse effects resulting from the bypass, the permitting authority should also ensure that the bypass will not cause exceedances of WQS.

This Policy does not address the appropriateness of approving anticipated bypasses through NPDES permits in advance outside the CSO context'.

7) The NPDES permit was redesigned since Erie's last renewal. This permit redesign no longer made the exceedance of the treatment plant design flow an NPDES violation. Any exceedance of flow would be handled through the Chapter 94 program and not the permit. No. 2 Supplemental Information simply identifies what flow was used in determining the mass limitations on page 2A of the permit. Therefore, your suggested addition to the narrative: **'determined as a 30-day average without consideration of the effect of CSO discharge flows'**, would not effect how we view a potential, hydraulic overload situation under our Chapter 94 program. The Department views this change as unnecessary.

Also, as discussed with Erie and its consultants at previous meetings, Erie may wish to explore and pursue a re-rating of the treatment plant hydraulic design flow in the future if the plant becomes hydraulically overloaded. This could potentially avoid the need for plant expansion, connection restrictions, etc. and the other concerns in your letter. For your information and reference, reprinted below are the Chapter 94 definitions of "hydraulic design capacity" and "hydraulic overload". As



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observed in the definition, the "hydraulic design capacity" is one flow value, in million gallons per day, at which the plant is expected to provide consistent treatment (including wet weather influences). Depending on future treatment plant performance considering CSO discharge flows, Erie may wish to adjust this "hydraulic design capacity" flow value upward from 68.6 MGD through plant re-rating, to resolve any potential "hydraulic overload" issues and avoid further plant expansion.

*Hydraulic design capacity*—The maximum monthly design flow, expressed in millions of gallons per day, at which a plant is expected to consistently provide the required treatment or at which a conveyance structure, device or pipe is expected to properly function without creating a backup, surcharge or overflow. This capacity is specified in the water quality management permit (Part II permit issued under Chapter 91) (relating to general provisions).

*Hydraulic overload*—The condition that occurs when the monthly average flow entering a plant exceeds the hydraulic design capacity for 3-consecutive months out of the preceding 12 months or when the flow in a portion of the sewer system exceeds its hydraulic carrying capacity'.

8) Since CSO outfalls 13, 33, and 34 have been eliminated we have deleted them from the permit. The current CSOs listed in this latest re-draft NPDES is taken from Appendix C of the May 2001 Long Term Control Plan prepared by Malcolm Pirnie. We count 18 existing CSOs.

9) The Department's revised Part C - CSO condition language (which has EPA approval) allows specific LTCP milestone dates to be included in the permit. We therefore gleaned remaining uncompleted projects from the 5-Stage Action Plan, as described in the May 2001 LTCP, and included them in the CSO Special Condition in Part C. The completion dates are taken from the LTCP document directly as written.

10) The typographical error in the TRC special condition has been corrected.

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A fourth draft permit was prepared, including the changes noted above due to the City's and Erie Sewer Authority's comments on the 3<sup>rd</sup> draft (February 2000 letter), and including the new, EPA approved CSO Part C Special Condition (#9 above). The City of Erie provided minor comments and proposed wording changes to the 4<sup>th</sup> draft via a September 14, 2001 letter. Because the Department is agreeable to these minor changes, Erie was contacted via telephone on 10/25/01 (call from Dave Balog to Douglas Mitchell, Assistant Director of Public Works), and asked if a final permit document could be prepared reflecting these exact wording changes and issued in final. Erie agreed to this request. The Pennsylvania Bulletin official 30-day comment period on the 4<sup>th</sup> draft ends October 29, 2001. To date no other comments (other than Erie's) have been received. Erie's comments are addressed below.



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In addition, the EPA by letter dated September 25, 2001, formally withdrew their long-standing objection (began November 26, 1996) based on their review of the fourth draft. EPA, however, requested two minor changes be made to the final permit before issuance. These changes will be made as noted below.

**City of Erie proposed revisions/wording changes (September 14, 2001 letter):**

1. Erie noted the following previously permitted CSO outfalls should be eliminated or descriptions changed:

- From Lake Erie – outfall 033
- From Garrison Run – outfalls 049 and 050
- From Mill Creek – outfall 006
- From Mill Creek – outfall 012
- Mill Creek – latitude for CSO 014 is changed to 42 deg. 07 min. 25 sec.
- Mill Creek – CSO 029 location changed to read “Intersection of 26<sup>th</sup> and French Streets”.

These changes are noted on page 1 and pages 2E and 2F of the final permit.

2. Proposed Modifications to Part C, Special Condition 4. CSO-Related Bypass Condition. The City proposed revised language to describe the “trigger” conditions when the CSO-related bypass at sub-outfall 201 and/or Overflow Retention Facility overflow at outfall 002 could be used. An on-going point of contention has been that Erie does not believe bypasses through sub-outfall 201 need to be reported within 24 hours; the flow through 201 is blended with the main treatment plant effluent from 101 before final discharge, and they contend effluent limits will be met even with this “blended” flow. Therefore, they believe the permit boilerplate condition at Part B.1.f.(1) provides that bypassing not exceeding effluent limitations is not subject to the reporting and notification requirements of Part A.3.c (24-hour reporting section). The Department believes that the ORF bypasses have also been demonstrated in prior Act 537 Plans, etc. to be “essential for maintenance to assure efficient operation”, also a requirement at B.1.f.(1) for not reporting the bypass within 24 hours.

After studying the bypass condition and obtaining legal interpretation, the Department agrees with striking the 24-hour reporting requirement for sub-outfall 201 bypasses. However, Erie stated and the Department agrees that this reporting will instead be done as part of the next monthly DMR report for the overall treatment plant. DEP will therefore receive notification of any bypasses through 201 by the 28<sup>th</sup> day of the subsequent month. Erie plans to demonstrate that effluent limits will be met during a bypass from 201.

The revised “trigger” language and CSO-related bypass narrative condition in the final permit will be identical to the language provided in the September 14, 2001 Erie comment letter. Refer to that document for the specific changes for sub-outfall 201 language and reporting.

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For outfall 002 bypasses (emergency ORF overflow to Mill Creek), Erie suggested and DEP agrees the 24-hour notification requirement should be retained for these bypasses directly to Mill Creek, after primary treatment and disinfection in a yet to be constructed ORF overflow chlorine contact tank. The language in the Erie September 14, 2001 comment letter will be used verbatim. It is not expected this outfall will be used very frequently. This final permit contains TRC and fecal coliform limitations (previous three drafts did not) for outfall 002 to ensure proper disinfection requirements are achieved.

Another change Erie requested was that the phrase "target flow of 90 MGD" is used in the trigger conditions for sub-outfall 201 and outfall 002. Erie contends there may be future, unforeseen situations at the treatment plant such as upset, poor sludge settling, a drop off in treatment efficiency, etc. that, when coupled with an extended precipitation event, could necessitate activating the ORF bypass and/or outfall 002 before the true influent flow rate of 90 MGD is reached. Erie contends that waiting to activate the bypass until 90 MGD is reached in such situations could cause solids washout, solids carryover in the effluent, etc. unless it is activated sooner. As Erie continues to maximize more stormwater flow to the plant as part of on-going CSO work, they will continue to study the effects of these high peak flows on treatment operations.

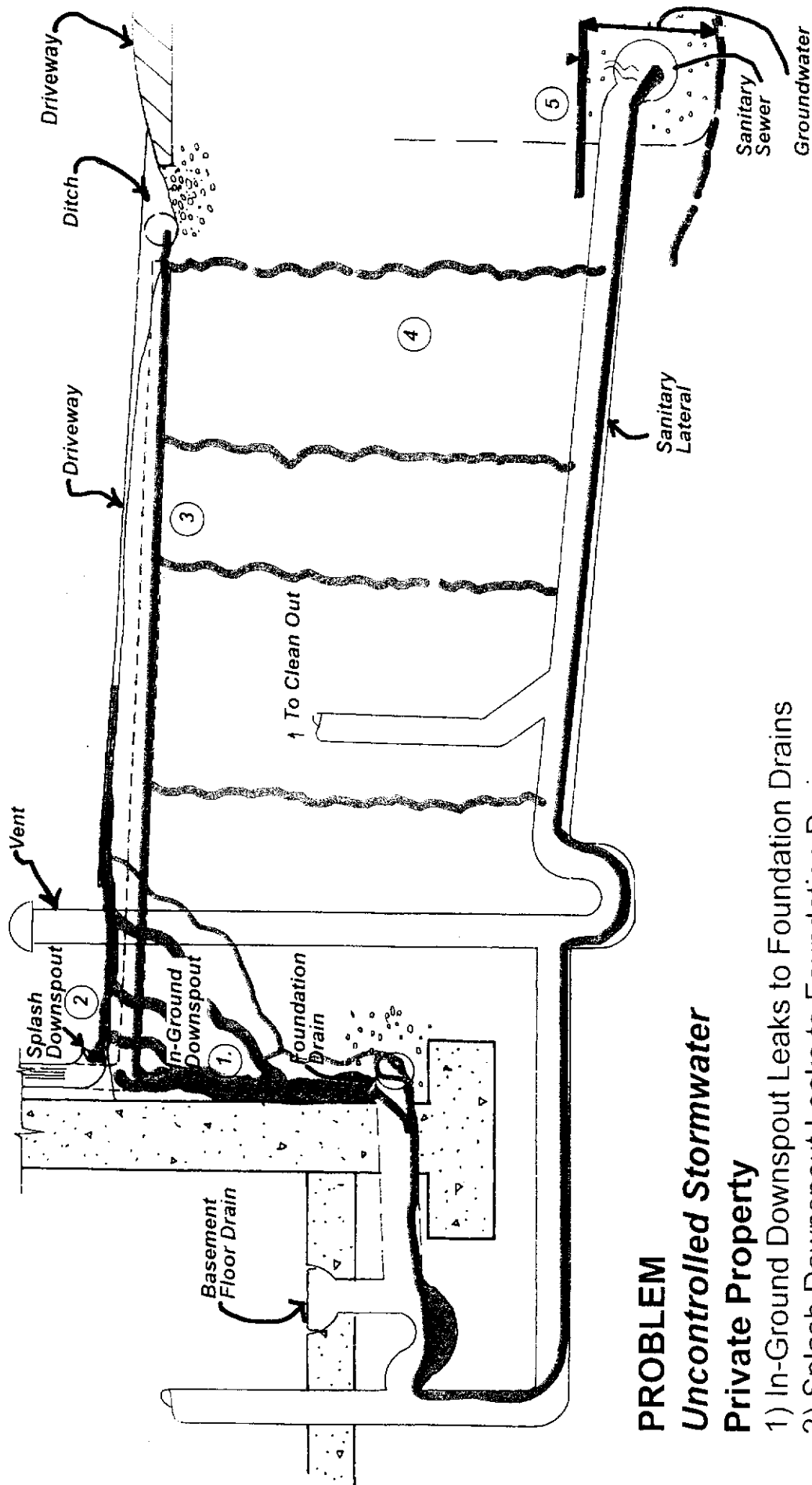
Erie proposed that DEP revise the "trigger" conditions for sub-outfall 201 and outfall 002 using their suggested phrase "target flow of 90 MGD", with a separate condition to include in the permit explaining what this phrase means to address the above concerns. For sub-outfall 201, Erie stated in the condition that they must demonstrate effluent limits will be met even for such bypassing before 90 MGD. DEP agrees this request is reasonable, and will include this phrase "target flow of 90 MGD", with its explanation paragraph, in the final permit exactly as written in the Erie September 14, 2001 comment letter.

Neither the City of Erie nor the Erie Sewer Authority raised any additional issues besides these on the 4<sup>th</sup> draft permit. The changes will be made in the final permit document.

**EPA minor changes/additions to final permit (September 25, 2001 letter):**

1. Under the Part C – Pretreatment Special Condition, EPA states the paragraph D. Headworks Analysis requirement on page 18 has already been completed, so this can be removed from the final permit.
2. Whole Effluent Toxicity (WET) Testing – In accordance with 40 CFR 122.21(j), the City is required to submit WET testing results with the next permit renewal application. EPA suggests a Special Condition (one provided in their September 25, 2001 letter) be added to the final permit reminding Erie of this fact. The Department routinely includes a similar condition in sewage NPDES major renewals, so the Department agrees to this finding, and will include EPA's suggested language as a new Special Condition #6 in the final permit requiring Erie to submit WETT results with their next renewal application.

**It is recommended the above changes be made to the 4<sup>th</sup> draft of the NPDES Permit, and it be issued in final as soon as possible after the October 29, 2001 draft comment period ends.**



**PROBLEM**  
**Uncontrolled Stormwater**  
**Private Property**

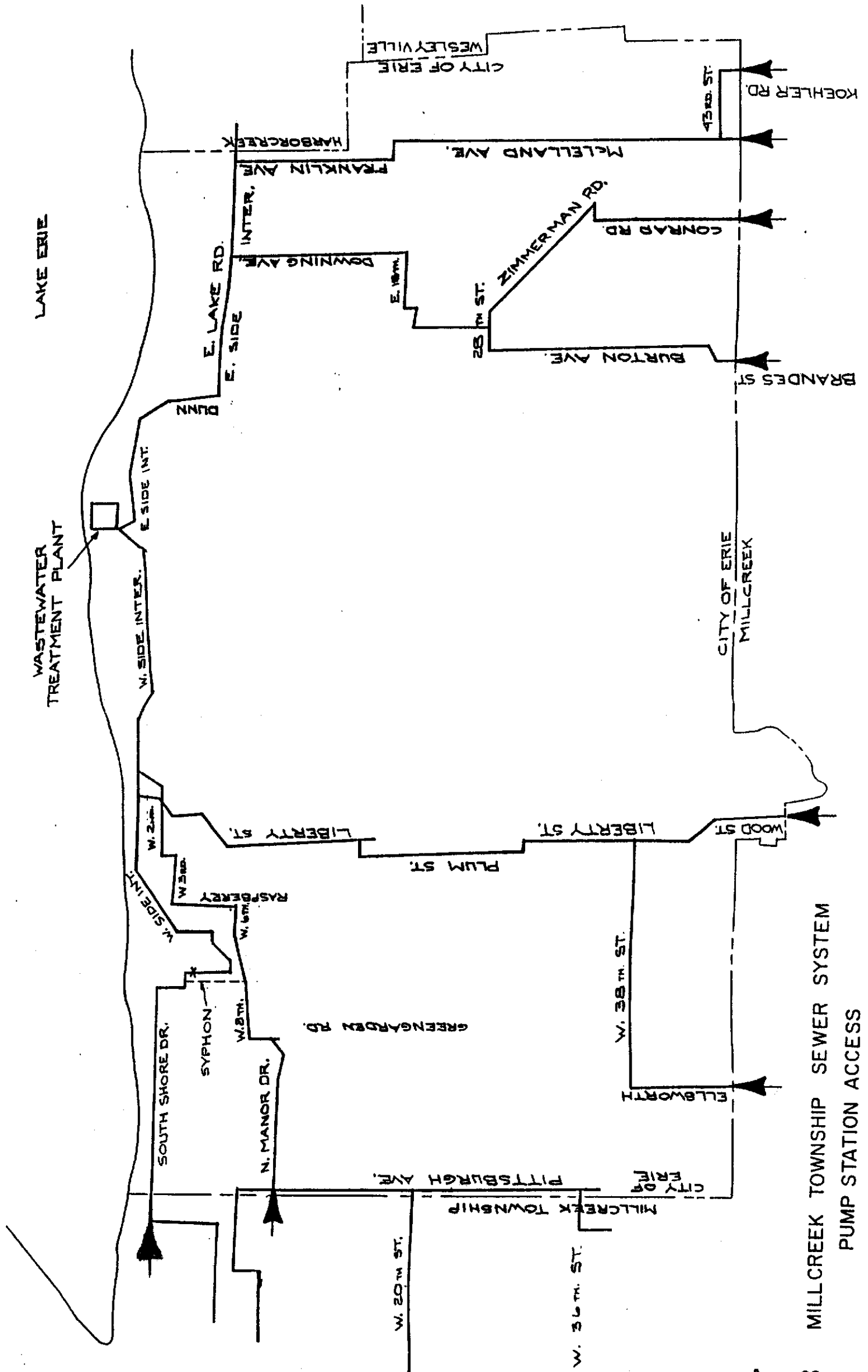
- 1) In-Ground Downspout Leaks to Foundation Drains
- 2) Splash Downspout Leaks to Foundation Drains
- 3) Surface Runoff to Foundation Drains

**Public Property Contributors**

- 4) Lateral Leaks
- 5) Mainline Leaks

MILLCREEK TWP., PA

**URS**



MILLCREEK TOWNSHIP SEWER SYSTEM  
PUMP STATION ACCESS  
TO CITY OF ERIE SEWER SYSTEM

MSA-MT 1155

ERIE CITY REGIONAL INTERCEPTOR

Upon motion by George S. Pulakos, seconded by Paul J. Martin, the following ordinance was duly enacted, 3 voting in favor of enactment, 0 voting against enactment.

ORDINANCE NO. 89-29

An Ordinance to regulate the use of public sanitary sewers in Millcreek Township, Erie County, Pennsylvania; to replace Millcreek Township Ordinances 97 and 76-27; defining terms; prohibiting certain practices with respect to disposal of sewage; requiring and providing for the making of connections to available public sewers according to Township Rules and Regulations (attached hereto); authorizing the Supervisors to make such connections and recover the cost thereof in case of neglect or refusal of owners to do so; requiring applications for and the issuance of permits to make connections, including execution of bonds and payment of fees in connection therewith; imposing duties on owners of property which discharged industrial wastes and potentially harmful substances into said sewers; regulating substances that may be introduced into said sewers; prohibiting the discharge of certain kinds of described liquids or wastes, including those not in conformity to the Millcreek Township Industrial Waste Ordinance (Ordinance 85-3); providing penalties; including repealer and severability clauses.

WHEREAS, Millcreek Township has heretofore approved the construction by Millcreek Township Sewer Authority of certain additional sewers, pumping stations, force mains and appurtenances constituting additions to the aforesaid existing sewer system of the Township; and

WHEREAS, the aforesaid Authority and the Township have entered into a Contract and Lease under the terms of which the Authority has leased to the Township the aforesaid additional sewers, etc., for operation by the Township; and

WHEREAS, certain Rules and Regulations must be stipulated and adopted with respect to the use of the sanitary sewage system and the making of connections thereto.

NOW, THEREFORE, BE IT ENACTED AND ORDAINED by the Board of Supervisors of Millcreek Township, Erie County, Pennsylvania, that in lieu of the former Ordinances #76-27 and 97, the following be enacted:

SECTION I. Definitions: Unless the context specifically indicates otherwise, the meaning of the terms used in this Ordinance shall be as follows:

- A. Township Engineer - the engineer employed by Millcreek Township or any authorized member of his staff.
- B. Consulting Engineer - the Registered Professional Engineer employed by the Township for the design and supervision of construction of sewers and appurtenances within Millcreek Township, or any member of his staff.
- C. Sewage Works - All facilities for collecting, pumping, transporting, treating and disposal of sanitary sewage and industrial wastes.
- D. Sewer - A pipe or conduit for carrying sewage.
- E. Sanitary Sewers - A sewer which carries sanitary sewage and/or industrial wastes and to which storm, surface and ground waters are not intentionally admitted.



- F. Storm Sewer or Storm Drain - A sewer which carries storm, surface water, drainage and some industrial water discharges, such as cooling and air conditioning waters, but excludes sanitary sewage and polluted industrial waters.
- G. Sewage Treatment Plant - Any devices and/or structures and facilities used for treating of sanitary sewage and industrial wastes.
- H. Sewage - Any combination of water carried wastes from residences, buildings, industrial establishments, institutions, manufacturing plants, processing plants, commercial establishments, or other places in which such wastes are produced, together with such ground, surface, storm or other water as may be present.
- I. Industrial Waste - Shall be construed to mean any liquid, gaseous, radioactive, solid, or other substance, not ordinary waste or sewage, but including discharges from pretreatment facilities, resulting from any manufacturer or industry or from any establishment including those recovering or processing natural resources. Industrial waste shall include all such substances whether or not generally characterized as waste.
- J. Biochemical Oxygen Demand (BOD) - The quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at 20° C expressed in milligrams per liter.

- K. Suspended Solids - Solids that either float on the surface of or are in suspension in water, sewage or other liquids and which are removable by laboratory filtering in accordance with standard laboratory procedure.
- L. Standard Laboratory Procedure - The procedure prescribed in the latest edition of Standard Methods for the Examination of Water and Wastewater.
- M. Garbage - Solid wastes from the preparation of cooking and dispensing of food and from the handling, storage and sale of produce.
- N. Properly Shredded Garbage - Garbage which has been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half inch in any dimension.
- O. Natural Outlet - Any outlet into a water course, ditch, pond, lake or other body of surface of ground water.
- P. Person - Any individual, firm, company, association, society, corporation or group.
- Q. Private Well - Any well owned by any person for his private use in providing water for any purpose whatsoever.

- R. Records - Includes book, documents, papers, apparatus, data, readings, records of analysis, plans and graphs.
- S. Shall and May - "Shall" is mandatory; and "may" is permissive.
- T. Township - Millcreek Township, Erie County, Pennsylvania, its agents or employees.

SECTION II. Use of Public Sewers Required.

- A. It shall be unlawful for any person to place, deposit, or permit to be deposited in an unsanitary manner upon public or private property within Millcreek Township, Erie County, Pennsylvania, or in any area under the jurisdiction of said Millcreek Township, human or animal excrement, garbage or other objectionable waste.
- B. It shall be unlawful to discharge sanitary sewage into any natural outlet within Millcreek Township or to discharge industrial wastes or other polluted water into said outlets unless the person so doing is operating with the approval of, or under a permit issued by, the Pennsylvania Department of Environmental Resources, or the Environmental Protection Agency.
- C. It shall be unlawful to construct or maintain any privy, privy vault, or cesspool, other than an on-lot system approved by the Township and constructed in accordance with the current requirements of the Pennsylvania Department of Environmental Resources.

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D. Each owner of any house, building or property used for human occupancy, employment, recreation, or other purpose, situated in Millcreek Township and abutting on any street, alley or right-of-way or easement in which there has been constructed a public sanitary sewer and the principal building is within one hundred fifty (150) feet of said sewer, shall at his own expense install suitable sanitary facilities therein and connect such facilities and industrial waste outlets directly with the proper public sanitary sewer in accordance with the provisions of this Ordinance within sixty (60) days after the date of official notice to do so given in the manner provided by law. In the event any owner of property shall refuse or neglect to connect with such sewer system within said sixty (60) day period, the Township Supervisors or their agents may enter upon such property and construct such connection. In such case, the Township Supervisors shall forthwith, upon completion of the work, send an itemized bill of the cost of the construction of such connection to the owner of the property which connection has been so made, which bill shall be payable forthwith. In case of neglect or refusal by the owner of such property to pay said bill, it shall be the duty of the Township Supervisors to file municipal liens for said construction within six months of the date of the completion

of the construction of said connection, the same to be subject in all respect to the general law provided for the filing and recovery of municipal liens. The above regulations shall not apply to the owner of any property who is operating under a permit from, or with the approval of, the Pennsylvania Department of Environmental Resources.

- E. Each owner of any premises as set forth in Section II-D above shall make application in writing to the Township for a permit to make the required connection to the public sanitary sewer. Such application shall set forth the name of the owner or owners, the location of the lot including the street and number and a description thereof, together with a plan of said premises showing the proposed connection and the sanitary facilities. Each applicant shall execute a Bond in favor of the Township and pay the fee as required by Sections 5 and 6 of Ordinance No. 76 enacted by the Supervisors of Millcreek Township on the 3rd day of December, 1956.

The Bond shall be in the amount of One Thousand (\$1,000.00) Dollars and shall be conditioned "that the applicant shall well and faithfully observe and comply with all the rules and regulations of said Township of Millcreek for or on account of any damages or injuries received or sustained by any party or parties, in the construction of said connection, or the maintenance thereof, or by or in consequence of any negligence

in guarding the same, or by or on account of any act or omission of the said party, or his agents or employees, and shall also well and faithfully comply with all the conditions of said PERMIT in every particular, and shall pay, or cause to be paid, when due and payable, each and every assessment that shall hereafter be made upon his real estate, abutting the line of said Township sewer system for the construction of the same, then this obligation to be void and of no effect, otherwise to be and remain in full force and virtue."

Upon the execution of the said Bond and the payment of a fee of Seventy-Five (\$75.00) Dollars, the applicant shall be entitled to a permit to make such connection.

- F. All connection made to any public sanitary sewer of Millcreek Township shall be constructed in compliance with standard rules and regulations governing the making of connections. Said rules and regulations presently in effect as a result of adoption of within Ordinance are attached hereto.

SECTION III. Use of public Sewers.

- A. No person shall discharge or cause to be discharged, any storm water, surface drainage, ground drainage, roof runoff, subsurface drainage, or unpolluted industrial process waters into any public sanitary sewer.

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- B. Storm water and all other unpolluted drainage shall be discharged into such sewers as are specifically designated as storm sewers, if available, or to a natural outlet approved by the Township Engineer. Unpolluted process waters shall be discharged into a storm sewer approved by the Township Engineer or into a natural outlet if such storm sewer or outlet is not available.
- C. No person shall discharge or cause to be discharged any of the following described waters or wastes into any public sanitary sewer:
1. Any liquid or vapor having a temperature higher than 150 degrees F.
  2. Any water or waste which may contain more than 100 milligrams per liter, by weight, of fat, oil or grease.
  3. Any gasoline, benzene, naptha, fuel oil, or other flammable or explosive liquid, solid or gas.
  4. Any garbage that has not been properly shredded.
  5. Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure, or any other solid or viscous substance capable of obstruction to the flow in sewers or other interference with the proper operation of the sewage works.

6. Any waters or wastes having a ph lower than 5.5 or higher than 9.0, or having any other corrosive property capable of causing damage or hazard to structure, equipment processes, and personnel of the sewage works.
  7. Any waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, or create any hazard in the receiving waters of the sewage treatment plant.
  8. Any waters or wastes containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the sewage treatment plant.
  9. Any noxious or malodorous gas or substance capable of creating a public nuisance.
  10. Water or wastes containing substances which are not in conformance with the provisions and Pollutant Limitations of Millcreek Township Industrial Waste Ordinance, Ordinance NO. 85-3.
- D. Grease, oil, and sand interceptors shall be provided for outlets connected with the public sanitary sewers when, in the opinion of the Township Engineer, they are necessary for the

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proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Township Engineer, and shall be located so as to be readily and easily accessible for cleaning and inspection.

Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight, and equipped with easily removable covers which when bolted in place shall be gastight and watertight.

- E. All oil, grease and sand interceptors, where required, shall be installed and maintained by the owner at his expense. Such units shall be operated and maintained so that they shall be continuously efficient and shall be cleaned and repaired as required to maintain such efficient operation.
- F. The admission into the public sewers of any polluted waters or industrial wastes containing any quantity of substances having the characteristics described in Subsection C of this section shall be subject to the provisions of Millcreek Township Ordinance No. 85-3.

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- G. Where preliminary treatment facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.
- H. When required by the Township Engineer, the owner of any property served by a building sewer carrying industrial wastes discharging into the public sanitary sewers, shall install a suitable control manhole in the building sewer to facilitate observation, sampling and measurement of the wastes. Such manhole, when required, shall be accessibly and safely located, and shall be constructed in accordance with plans approved by the Township Engineer. The manhole shall be installed by the owner at his expense, and shall be maintained by him so as to be safe and accessible at all times.
- I. Every person and establishment other than residences, discharging industrial and sanitary wastes into the public sewers of Millcreek Township, or into any sewer connected therewith, shall forthwith file a report in accordance with the provisions of Millcreek Township Ordinance No. 85-3.
- J. Every person discharging any industrial waste mixture into the public sanitary sewer or sewers connected thereto, shall keep and maintain records of the data required to be furnished in the questionnaire as defined above and such records shall be available for inspection during regular business hours by

authorized representatives or employees of Millcreek Township upon presenting written credentials of their authority, and such representatives or employees shall be permitted to make and retain copies of such records.

- K. The Township may conduct such tests as are necessary to enforce this Ordinance, and employees of the Township or its agents may enter upon any property for the purpose of taking samples, obtaining information or conducting surveys or investigations relating to such enforcement. Enforcement of the provisions of this Ordinance regarding wastes which will interfere with the operation of the Erie waste water treatment plant shall be by the Township or its agents.
- L. Limitations on the wastewater strength in the preceeding paragraphs of this section may be supplemented with more stringent limitations if: (A) - the Township determines that those limitations may not be sufficient to protect the operation of the treatment works, or (B) - the Township determines that the limitations are not sufficient to enable the treatment works to comply with water quality standards or effluent limitations specified in the National Pollutant Discharge Elimination System permit (NPDES) or the Pennsylvania Department of Environmental Resources permit.
- M. The discharge or introduction of non-domestic pollutants from any source into the sanitary sewers of the Township shall be in accordance with Millcreek Township Ordinance No. 85-3.

MSA-MT 5082

SECTION IV. Alternate to using Public Sewer.

In lieu of introducing untreated or partially treated industrial wastes and polluted waters into the public sanitary sewers of Millcreek Township, the owner of premises producing such wastes may construct and operate, at his expense, private waste treatment facilities, with the effluent discharged to a natural outlet; provided such facilities are constructed and operated in compliance with all applicable requirements of the Township, the Pennsylvania Department of Environmental Resources and the Environmental Protection Agency.

Where such private waste treatment facilities are provided, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.

SECTION V. Protection from Damage.

No person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance, or equipment which is a part of the municipal sewage works.

SECTION VI. Powers and Authority of Inspectors.

The Township Engineer and other duly authorized employees of Millcreek Township bearing proper credentials and identification, shall be permitted to enter upon all properties for the purposes of inspection, observation, measurement, sampling and testing, in accordance with the provisions of this Ordinance.



SECTION VII. Penalties.

A. Monetary Liability Section.

Section 1. Penalties. Any person who violates any provision of this Ordinance or who continues any violation shall forfeit and pay to the Township a fine of not exceeding \$500.00 for each violation. In this section each day of a prohibited discharge shall constitute a separate violation, if such discharge is continuous. If a prohibited discharge is intermittent, each occurrence shall be considered a separate violation.

Section 2. Reimbursement for Costs to Township. Failure to comply with any portion of this Ordinance, or with any permit or order issued hereunder, shall be sufficient cause for the Township to levy on and collect from each violator any additional cost for expense, loss, or damage occasioned by such violation.

B. Enforcement Actions.

Section 1. Multiple Alternatives. When the Township determines (A) that a violation of this Ordinance or any permit, or (B) any damage to the Township's collection system, is threatened or has occurred, one or more of the following actions may be taken:

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- a. The Township shall issue an order to cease and desist any such violation and shall direct the violator(s) as follows:
  1. To comply either forthwith or in accordance with a time schedule set forth by the Township; or
  2. To take appropriate remedial preventive action in the event of a threatened violation.
- b. The Township may require the user in question to submit a detailed time schedule setting forth the specific proposed actions to prevent or correct a violation. The Township may issue an implementation schedule to the user containing or modifying such specific actions and time schedule or requiring other actions within such time as the Township deems appropriate.
- c. The Township may issue an order directing the user to pay to the Township penalties and costs in accordance with the Monetary Liability Section above.
- d. The Township may revoke the bond or license of any approved contractor for up to one year.
- e. The Township may take direct enforcement action by filing suit in any court of competent jurisdiction pursuant to general laws or any other applicable statute or regulation.

f. Each day or portion thereof a violation of this Ordinance continues shall constitute a separate violation.

g. Any person who continues to violate the discharge provisions of this Ordinance shall be subject to disconnection from the Township's waste water facilities.

SECTION VIII. Validity.

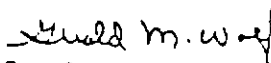
A. All Ordinances or parts of Ordinances in conflict herewith are hereby repealed.

B. The invalidity of any section, clause, sentence, or provision of this Ordinance shall not affect the validity of any other part of this Ordinance which can be given effect without such invalid part of parts. It is hereby declared to be the intention of the Supervisors of Millcreek Township that this Ordinance would have been adopted had such invalid section, clause, sentence, or provision not been included therein.

ENACTED AND ORDAINED this 18th day of December, 1989.

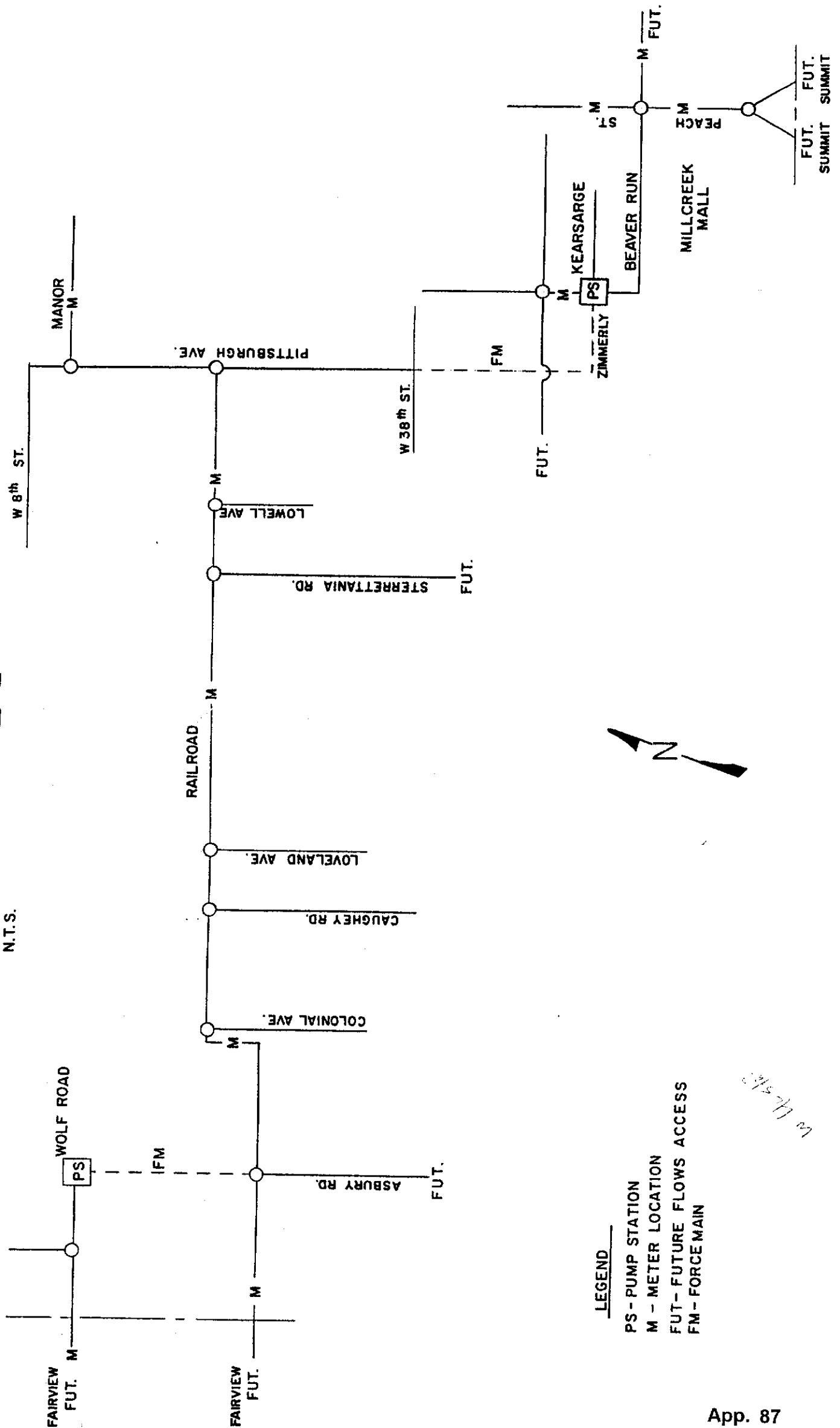
*Gerald M. Wolf*  
Gerald M. Wolf, Secretary  
Millcreek Township

I hereby certify that I am the duly appointed Secretary of the Township of Millcreek, that I am authorized to make this certification and that the foregoing Ordinance is true and correct copy of Ordinance No. 89-29 of the Township of Millcreek, passed by the Supervisors on December 18, 1989.

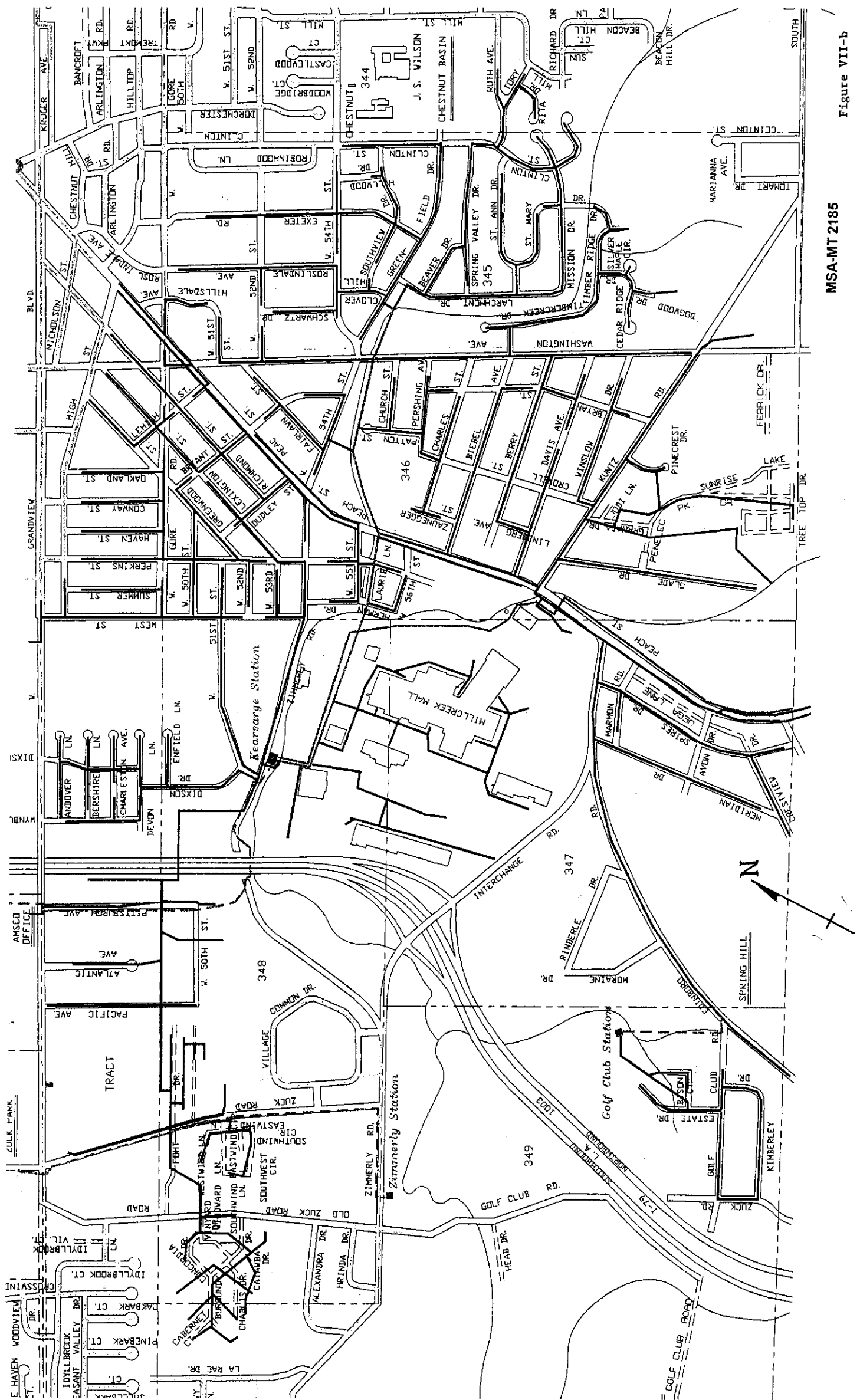
  
Gerald M. Wolf, Secretary

# MANOR DRIVE SEWER NETWORK

N.T.S.



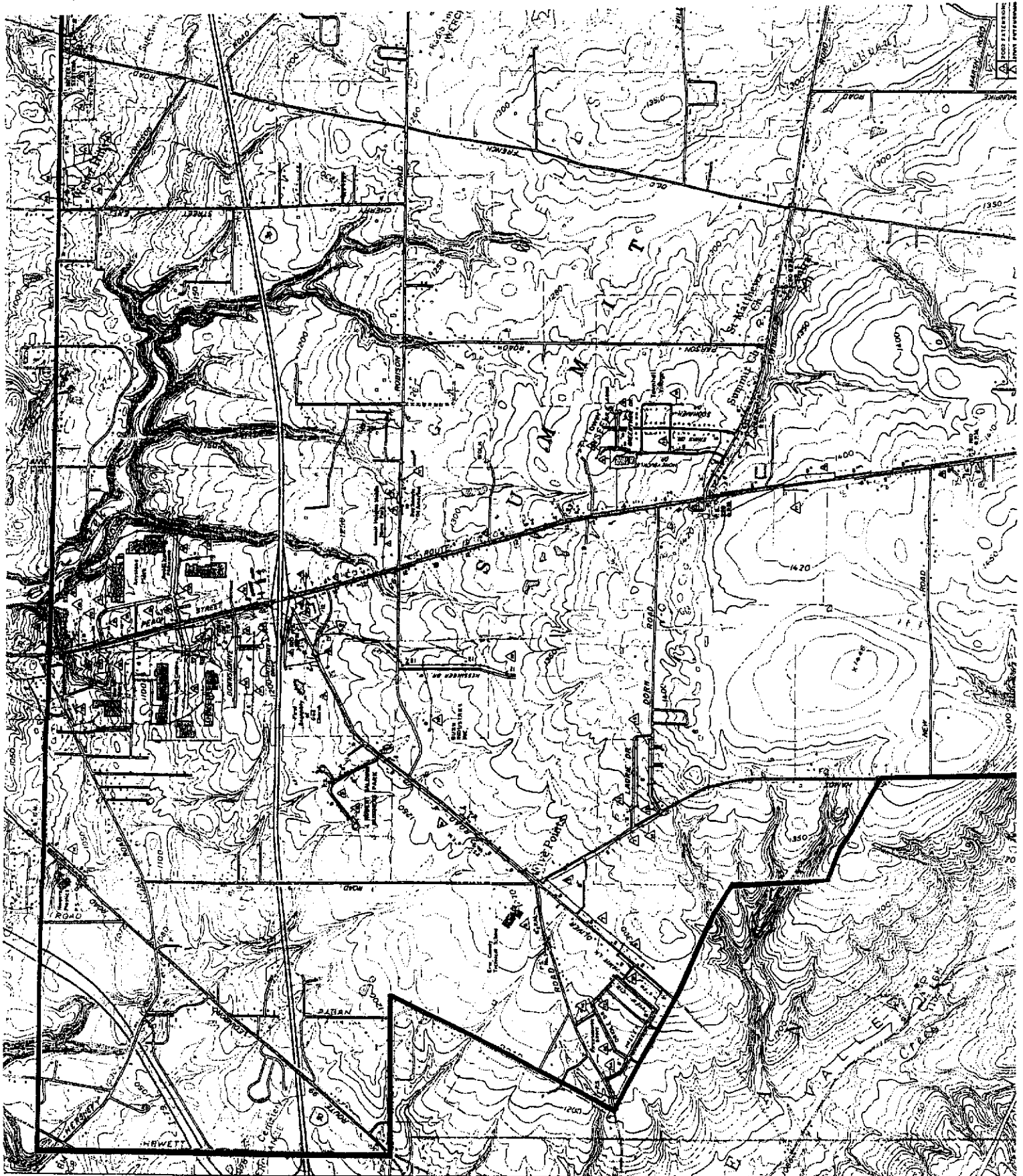
MSA-MT 1154



MSA-MT 2185

Figure VII-b





## Millcreek Township Sewer Authority

PRESQUE ISLE P.O. BOX 8332  
3608 WEST 26th STREET  
ERIE, PENNSYLVANIA  
16505

PHONE (814) 833-1111

June 21, 1991

Mr. Anthony Oprendeck, Jr.  
Water Quality Compliance Specialist  
Pennsylvania Department of Environmental Resources  
1012 Water Street  
Meadville, PA 16335

RE: Kearsarge Pump Station Bypass

Dear Mr. Oprendeck:

The following information is provided in reply to your letter of June 10, 1991 regarding a bypass line from the Kearsarge pumping station forcemain:

1. Date of installation: December 7, 1988
2. Work authorized by : Millcreek Township Sewer Authority  
Contractor: Chivers Construction Company, Fairview, PA
3. The bypass was installed due to severe flooding which occurred in the vicinity of the Kearsarge pumping station on October 18, 1988. On that date, following a severe thunderstorm, Walnut Creek and Beaver Run overflowed their banks, causing severe basement flooding in approximately 40-50 homes. Included among the flooded buildings was the Millcreek Community Hospital and Western Reserve Convalescent Home. Both of these buildings were evacuated due to the flooding. The flooding by these streams and the excessive storm water in this entire area filled the sanitary sewer system causing even greater basement flooding since the sewers were not usable to all homes connected to this system. The bypass was installed to remove the excessive stream & storm water flows and to prevent basement flooding.

The Pennsylvania DER should have been notified but was inadvertently not advised.

4. Bypass events - the bypass only operates in situations of possible flooding by Walnut Creek and Beaver Run. The bypass has been opened on two occasions. On March 6, 1991, from 10 PM to 12 AM (2 hours) and the Erie County Health Department was advised of pumping from manholes. The second occasion was in the fall of 1990 for about 6 hours, when Millcreek Township was pumping from manholes to prevent basement flooding. The Erie County Health Department was not advised of this event.
5. Only the Superintendent and Assistant Superintendent of the Sewer Maintenance Department operate the bypass.

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Mr. Oprendek  
June 21, 1991  
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6. The solution to the bypass is to provide additional sewer capacity through the City of Erie. The Kearsarge station has capacity to pump more water into the Erie sewers than the City sewers can carry. Millcreek has begun flow studies to determine the available sewer capacity in the Erie sewers. However, Millcreek cannot simply "dump" this water at the City's borders. As soon as the sewer studies are completed and solutions are identified, Millcreek is prepared to pay its' share of the cost of these projects.

Millcreek Township has taken the following steps to reduce the stream flooding along Walnut Creek and Beaver run:

- A. Beaver Run dredging - to be completed by October 1991
- B. Storm Water Management Ordinance - adopted June 1990 and requires storm water controls for all new subdivisions. Summit Township has adopted a similar ordinance.
- C. Storm water detention facility - proposed 280' X 490' detention area to be constructed adjacent to J. S. Wilson School to reduce flooding along both Beaver Run and Walnut Creek. Expected completion date is 1993.

The Millcreek Township Sewer Authority is prepared to eliminate this bypass as soon as possible. The stormwater controls by Millcreek Township are essential to reduce the storm water flooding of sanitary sewers. Increased sewer capacity across the City of Erie is likewise essential to eliminate this problem. The Pennsylvania DER can play an important role in solving this problem by expediting the efforts to provide increased sewer capacity into the City of Erie.

Very truly yours,

MILLCREEK TOWNSHIP SEWER AUTHORITY

Max G. Gill, Secretary/Manager

MGG/jka

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MSA-MT 0 872

## Millcreek Township Sewer Authority

PRESQUE ISLE P.O. BOX 8332  
3608 WEST 26th STREET  
ERIE, PENNSYLVANIA  
16505

PHONE (814) 833-1111

March 27, 1991

*11c 4-18-91 a  
J.D. - P.D.F. ha  
approved*

Mr. Tony Oprendeck  
Bureau of Water Quality Management  
Penna DER  
1012 Water Street  
Meadville, PA 16335

Dear Mr. Oprendeck:

Attached find the Millcreek Township Sewer Authority's Plan of Study and Task Activity Report for a "Special Study" to comply with your letter of March 8, 1991.

Please note that the task work schedule does not call for completion of all the work within the 120 day limit established by your letter. We do call for completion of Tasks 1.1 through 1.4 and Task 3.1 within the time frame required, and for submission of Interim Reports describing those efforts. The remaining tasks require the completion of flow studies some of which must be coordinated with the Erie City activities under their revised Plan of Study and Task Activity Report. Other tasks may benefit from the City's efforts or may be of benefit to the City. We, therefore, show those studies to be completed at the same time the City proposes completion of their flow studies on the regional interreceptor sewers. Our total study covers a period of twelve months which includes three months at the end to complete the evaluation of alternatives for increasing capacities within the subregional systems in Millcreek Township. However, we will provide two Interim Reports to provide as much information as possible to you within the 120 day time frame you established. These Interim Reports may be of benefit to the City in the initial stages of their facilities planning effort.

You will also note on the Task Work Schedule that Tasks 1.1 through 1.4 and Task 3.1 show a beginning time prior to the DER approval. The Authority had authorized their engineer to proceed with these activities prior to receipt of the DER's notice, so as to have the information available when desired by the City and in an effort to expedite the sewer planning process. This is the primary reason that allows us to complete these tasks within your 120 day time frame. You will also note on the Task Activity Report that the Authority is requesting payment for Task 1 and Task 3.1 under the reimbursable clause of Chapter 71. It is our understanding from our engineer (who has confirmed this with DER) that this early work can

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Mr. Tony Oprendeck  
March 27, 1991  
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be eligible. The fact that approval was not gained prior to starting the work is not considered in the DER's review, as a reason for finding the work to be ineligible.

If you should have any questions regarding the Task Activity Report, please contact our office or our Engineer, Consoer, Townsend & Assoc., Inc., c/o Gerald Allender at (814) 453-4394.

Very truly yours,

MILLCREEK TOWNSHIP SEWER AUTHORITY

Max G. Gill, Secretary/Manager

MGG/jka

CC: G. Allender w/encl.

Enc.

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P  
Y



MILLCREEK TOWNSHIP, ERIE COUNTY  
MILLCREEK TOWNSHIP SEWER AUTHORITY

537 FACILITIES PLANNING  
"SPECIAL STUDY"

TASK ACTIVITY REPORT  
&  
PLAN OF STUDY

FLOWS ENTERING THE CITY

This portion of the study will result in the determination of present and future flows into the City interceptors and a comparison of those flows with the capacity of the City's interceptor system and the township's transport system at the point of connection.

- 1.1 The existing capacity of the City's regional interceptors at the point of connection and of the township Sewer Authority's transport facilities will be determined from manufacturer's data or calculations using sewer size and slope.
- 1.2 This portion of the study will present information on the existing average and peak flows tributary to the City of Erie from the major/regional connections. These flows will include quantities obtained from flow depth meters (using sewer flow formulas), existing meters at pump stations, and pump capacity curves where meters are not available.
- 1.3 Future flows will be presented for all municipalities who have flows that are or will be tributary to the City of Erie at the points of interconnection between the City and Millcreek Township. Present flows will be included in all calculations. The communities include Millcreek, Fairview, Summit, and Greene Townships, and Fairview Borough. Of those communities Greene Township and Fairview Borough presently discharge no flows.
- 1.4 An interim report will be completed which will include a schematic of the regional interceptor sewers and the Millcreek transport facilities along with a graphic display of present and future flows versus capacities at the interconnections for both the City's receiving sewers and the township's transport facilities.
- 1.5 This task will include the efforts of the township required to provide information to the City for their intended flow study as outlined in their Revised Plan of Study. The schedule provided is constructed to coincide with the City's study effort timing. The township will be utilizing their velocity/depth meter to provide information to the City's 537 revision work.



SUBREGIONAL INTERCEPTOR NETWORKS

This work will primarily involve flow isolation work within those sewer subsystems known to have flow problems. Flows within the system will be quantified using hand held equipment but no continuously monitoring meter installations are proposed. Timing has been selected to coincide with the City's efforts to monitor the joint municipal sewers.

- 2.1 Suspected problem areas will be identified utilizing township records on basement floodings and known flow capacity problems as evidenced by sewer surcharges and overflows. These problem areas will be placed on a township map.
- 2.2 Flow isolation surveys will be performed on the subregional sewer networks found to have problems. The network will be mapped and key manholes will be identified for visual and hand held monitoring surveys. During high flow conditions the key manholes will be visited to isolate the areas of highest infiltration/inflow contribution. In the event more accurate flow information is required to determine the cost effectiveness of flow abatement, continuously monitoring flow meters will be considered but are not presently included within the time frame of the study.
- 2.3 Utilizing the quantity information obtained in the flow isolation studies and previous studies, the abilities of the Millcreek Township interceptor sewer system to carry existing and future sewage flows within the identified problem areas will be determined.
- 2.4 An interim report will be completed. A map will be constructed showing the subregional areas and identifying problem areas both present and future. Key manholes and interceptor lengths will be indicated and capacity vs. flow charts will be presented for those lengths.

ALTERNATIVE EVALUATION

The remaining capacities of the City's regional/main interceptors will be estimated for present and future loads.

Alternatives for increased conveyance capacity will be presented for the Erie City Regional sewer system and the Millcreek Township Transport Facilities and Subregional Conveyance systems. Evaluations will be completed on the Millcreek facilities alternatives in Task 3.2.

- 3.1 The City's regional interceptors will be mapped and the capacities of key lengths will be presented along with existing flow information including that obtained from past studies as well as more recent efforts. All flow information will be based on flow depths and sewer flow formulas.

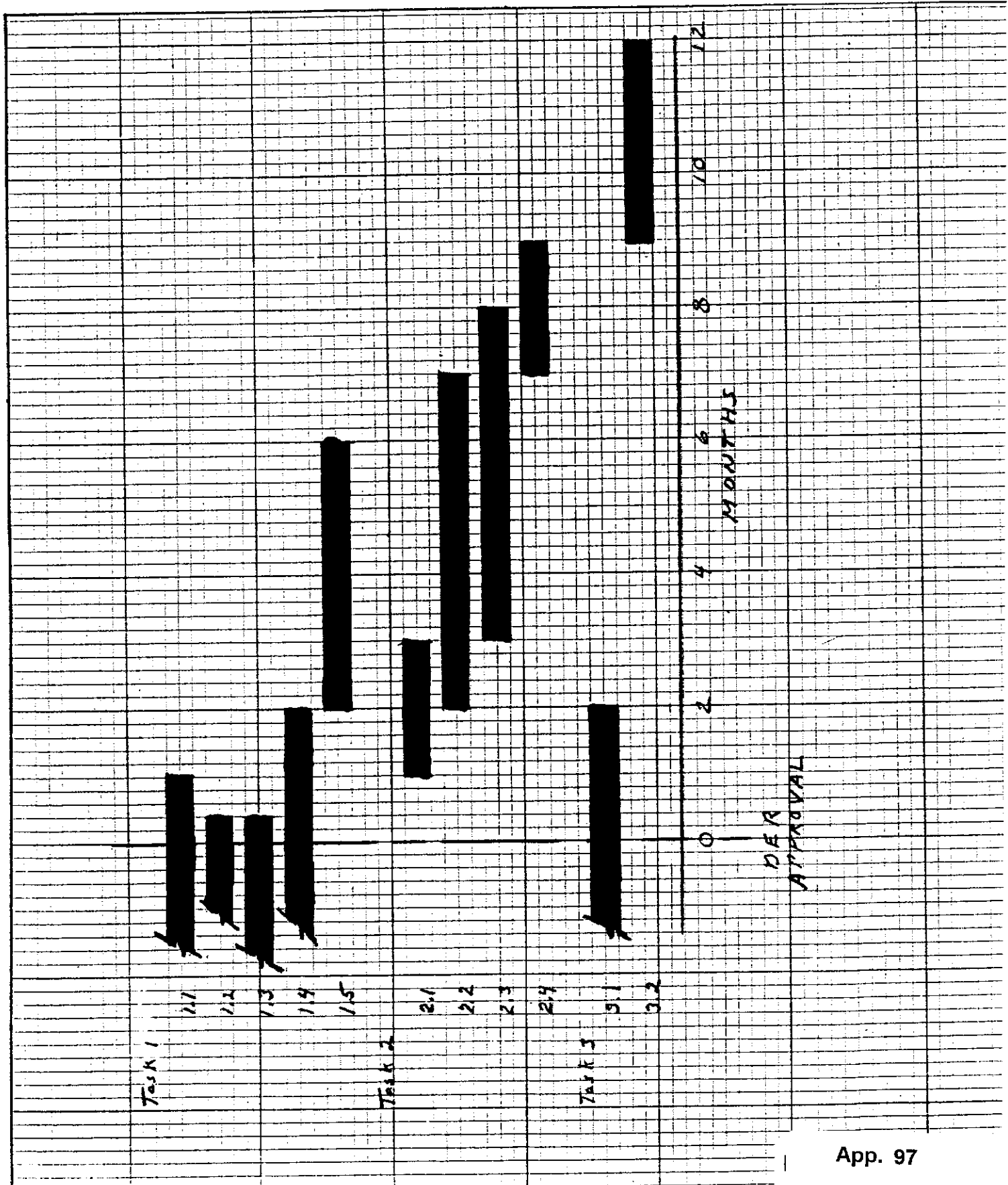
Alternatives to increase the capacity of regional interceptors and transport facilities will be presented for City and township facilities alike. This study will not presume to evaluate the alternatives available for the City's system. That will be left for the City's consultant. Alternatives to be considered will include: capacity increases; flow diversion; I&I abatement; storm water flow storage; and combined sewer elimination. The study will

evaluate the alternatives available for the township facilities under Task 3.2. An Interim Report will be submitted for this work at the conclusion of the task.

- 3.2 This task will evaluate the alternatives available to increase the service area capacity of the Millcreek Township sewerage system. The solutions available will first be defined. They then will be prioritized qualitatively as to their workability, dependability, etc. Then a cost analysis will be completed of the remaining alternatives including an estimate of the costs of increasing the City's interceptor sewage carrying capacity. This will be the only alternative investigated within the City by this study.

537 FACILITIES PLANNING  
"SPECIAL STUDY"

TASK WORK SCHEDULE



Completed plan will be submitted to DGR	12 months (June 1992)	Estimated Cost of plan	36,166
e completed plan will be submitted to DGR	12 months (June 1992)	Estimated Cost of plan	36,166

Additional Sheets if Necessary

Sheet 1 of 1

[illegible]

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Gerald C. Allender *Gerald C. Allender Assoc.*

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL RESOURCES

In the Matter of:

Millcreek Township	:	
and	:	Clean Streams Law
Millcreek Township	:	
Sewer Authority	:	

CONSENT ORDER AND AGREEMENT

This Consent Order and Agreement is entered into this 7th day of January, 1991, by and between the Commonwealth of Pennsylvania, Department of Environmental Resources ("Department"), Millcreek Township ("Township"), and the Millcreek Township Sewer Authority ("Authority").

Findings

The Department has found and determined the following findings which the Township and the Authority agree are true and correct.

A. The Department is the agency with the duty and authority to administer and enforce the Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §§691.1-691.1001 ("Clean Streams Law"); the Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. 1535, as amended, 35 P.S. §§750.1-750.20 ("Sewage Facilities Act"); Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, as amended, 71 P.S. §510-17 ("Administrative Code"), and the rules and regulations promulgated thereunder.

B. The Township, organized and existing under the laws of the Commonwealth of Pennsylvania, maintains and operates the Millcreek Township sewage collection system. The mailing address of the Township is P. O. Box 8268, Erie, PA 16505.

MSA-MT 6751

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C. The Authority, a municipal authority formed pursuant to the Municipal Authorities Act, the Act of May 2, 1945, P.L. 382, as amended, 53 P.S. §301 et seq., owns the Township's sewage collection system which is located in the Township of Millcreek and leased to the Township. The mailing address of the Authority is P. O. Box 8332, Erie, PA 16505.

D. Sewage generated in Millcreek Township, and Townships tributary to Millcreek Township, is conveyed to the City of Erie's sewerage system through various points, including points tributary to the Kearsarge Pump Station. The wastewater is ultimately directed to the City of Erie's Wastewater Treatment Plant before being discharged into Lake Erie, a water of the Commonwealth.

E. On January 6, 1984, the Department issued Water Quality Management Permit No. 2583409 ("Part II Permit") to the Authority pursuant to the Clean Streams Law, 35 P.S. §691.1 et seq., which, inter alia, authorized the Authority to increase the pumping capacity of the Kearsarge Pump Station. The Part II Permit did not authorize the Authority to construct or use a bypass around the City of Erie's sewage treatment plant nor authorize any new discharge point to waters of the Commonwealth identified in the City of Erie's National Pollutant Discharge Elimination System ("NPDES") Permit.

F. On June 24, 1991, the Authority notified the Department that a bypass line had been constructed on December 7, 1988 at the Kearsarge Pump Station ("Kearsarge Bypass"). The letter also stated that the bypass had been used by the Authority on at least two (2) occasions. The Kearsarge Bypass discharged to Walnut Creek, a water of the Commonwealth, on March 6, 1991 for two (2) hours and in the fall of 1990 for approximately six (6) hours.